

## [DE 4431606 A1 -- Computerized English Translation]

The invention concerns connected are a chip cards module with a semiconductor chip arranged on a flexible, not-leading carrier body, with that the two ending of a varnish wire spool electrically leading as well as a procedure to its manufacture. In such chip cards modules are used usually lackisolierte copper packing of wires with about 50 to 250  $\mu$  ms diameter. The ending of the spool become by means of leading connections, z. B. Silberleitkleber with which semiconductor chip connected. Because chip cards become and therefore also the Chipkartenmodule certain for the installation into a chip card in large numbers of pieces here gesture, an economical and simple must be found, i.e. therefore an if possible easily automatisierbares procedure to its manufacture. It is the task of the invention therefore to indicate a chip cards module as well as a procedure to the manufacture of a chip cards module, that or that fulfills these demands. The task is solved through a chip cards module in accordance with claim 1 as well as a procedure in accordance with claim 5. Advantageous continued educations of the invention are indicated in the dependent claims. Preferably the ending are equipped with a Lötzinn through submersion into a tin bath so that they can be connected on simple meadow by up enamel local of the Weichlotes on contact fields of the semiconductor chip with this. The carrier body must be at the same time out of a temperature steady Thermoplast, that the demands on Weichlötungen fulfills. A special advantage of the invention is that by the Verzinnung not only Weichlot is brought at the ending of the varnish wire spool, but rather also the protection varnish layer is removed. Therefore one saves himself a procedure step vis-à-vis the manufacture of a connection by means of Silberleitkleber. The invention more closely is clarified later based on an execution example by means of a figure. The figure shows broken shows a flexible, not leading carrier body 1, the one represented Ausnehmung 2, in which a semiconductor chip 3 is used. The semiconductor chips 3 is secured by means of a glue 4. On the carrier body 1, a spool 7 is arranged out of lackisoliertem copper packing wire. The ending of 6 this spool are equipped with a Weichlot out of tin, that becomes the connection of the spool 7 with the semiconductor chip 3 on contact fields of 5 the semiconductor chip 3 locally up enamel. The contact fields 5 are enlarged in more advantageously manner vis-à-vis usual contact fields of semiconductor chips by means of a gold levy. In the invention appropriate for chip cards module as well as its invention appropriate for manufacture, additional covers of the semiconductor chip 3 as well as the Spulenenden 6 can be avoided